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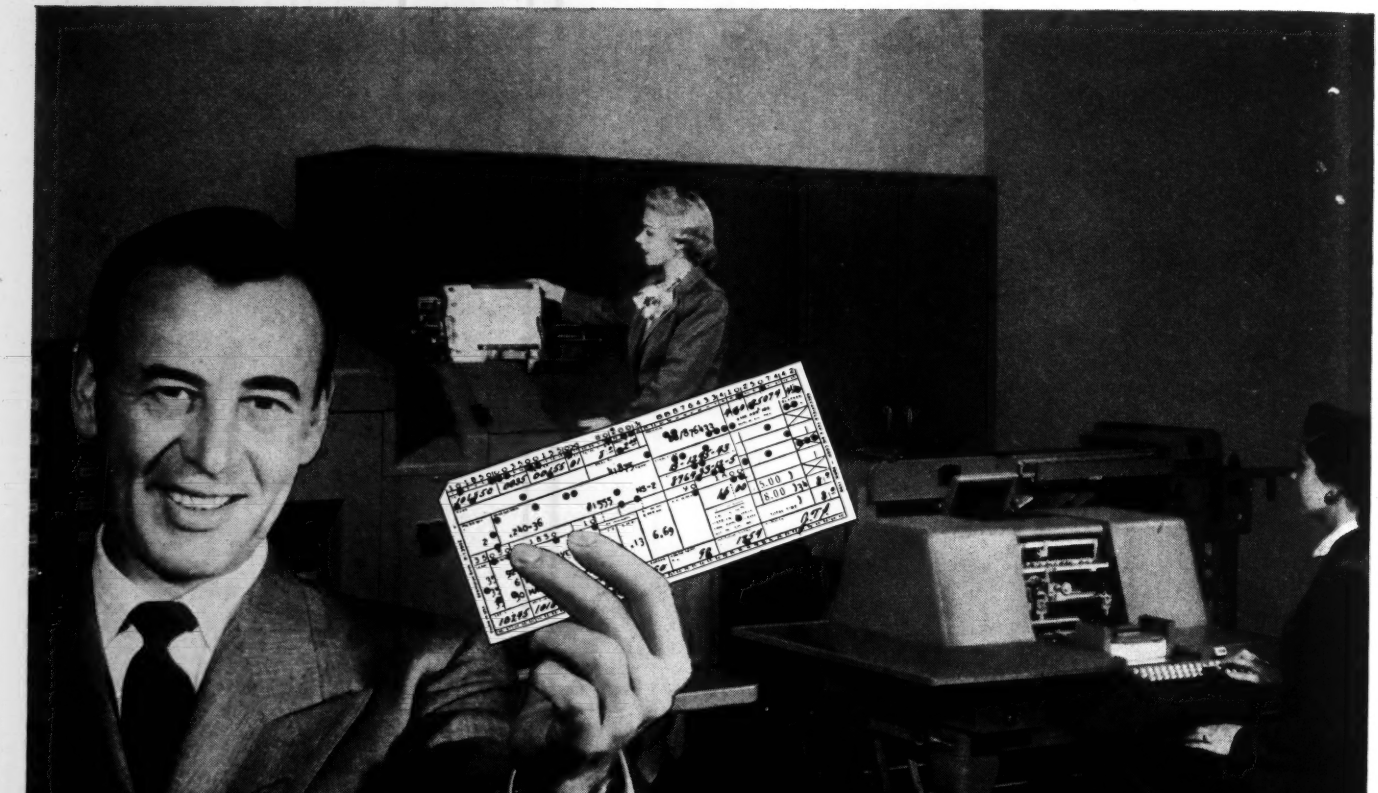
MAY 1951



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Management Education — *Special Issue*

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ADVANCED MANAGEMENT, published monthly by Society for Advancement of Management, 84 William Street, New York 7, N. Y., is merged with MODERN MANAGEMENT, and is successor to The Society for the Advancement of Management Journal, the Bulletin of the Taylor Society and of The Society of Industrial Engineers. Re-entered as second-class matter, December 23, 1949, at the Post Office at New York, N. Y., under the Act of March 3, 1879.
Copyright, 1951, Society for Advancement of Management.
Subscription rate: $8.00 per year. Single copies: 75 cents (members); $1.00 (non-members). An index to ADVANCED MANAGEMENT is published annually, and the contents are also indexed in *Industrial Arts Index* which is available at Public Libraries. Notification of address changes must be given four weeks in advance.

Management Education

FORUM

How Management and "Business" Schools Can Contribute Toward Maximum Utilization of Resources During the Emergency Period.

Part I—Educators

By Thomas H. Carroll, Dean, School of Business Administration, University of North Carolina
C. L. Jamison, Professor of Business Policy, University of Michigan
G. L. Bach, Dean, Graduate School of Industrial Administration, Carnegie Institute of Technology
C. Canby Balderston, Dean, The Wharton School of Finance and Commerce, University of Pennsylvania
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Part II—Executives

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Part III—Specialists

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Ewing W. Reilley, McKinsey and Company
H. E. Blank, Jr., Editor, Modern Industry

Part I—Educators

Educators, Executives and Specialists evaluate the role of education for Management in the light of today's conditions and tomorrow's needs.

Keynote for Management Industry Partnership

By THOMAS H. CARROLL

Dean, School of Business Administration,
University of North Carolina

MAJOR GENERAL Lewis B. Hershey, Director of Selective Service, provided an excellent "keynote" for this forum when, in presenting a plan for deferment of college students, he stated: "Military leaders recently testified before Congress that since we can not hope to match the Iron Curtain countries in manpower our advantage lies in our superiority in scientific and technical know-how." Research and management capacities such as are developed in our university schools of business administration, especially at the graduate and executive training levels, are resources which we need to discover and nurture. By so doing, we will help assure maximum use of highly specialized scientific and technical knowledge and skills, both present and potential.

A national emergency such as we now face involves a relatively rapid shift in the composition of the end products of the American economy. It is difficult, if not impossible, to effect these shifts through the usual mechanics of market control. As a result, governmental decisions in economic matters become increasingly authoritarian. These facts do not, however, alter management principles and basic techniques. Rather, old principles must be applied realistically to new and pressing problems. Thorough understanding of the principles is imperative if, to use an apt phrase, we are to avoid "hysterically throwing out the baby with the bath water."

Following the emotional shock of Pearl Harbor in World War II, there was a tendency for people in universities, including especially business schools, to rush into the armed forces or to other "war" jobs with little or no consideration of the net effect on the overall war effort. The present situation is different. We are facing a mobilization period of indeterminate length during which we shall be preparing for an all-out "hot" war that we sincerely pray will not occur; simultaneously, we will be engaging in either a cold or a warm war. A real danger would be involved in drumming up an atmosphere of emergency which might give sanction to personnel shifts that might prove wasteful in light of the predominantly production job to be done.

The business school's maximum potential service is likely to be given by keeping together to a substantial extent its two principal assets — the 2 B's or 2 P's — Brains (and Equipment) and Buildings or People (Personnel) and Plant (and Equipment). The combination of these elements, with a flexibility of "mix," may serve to promote (1) research, the creation of new knowledge by individuals or by integrated groups; (2) application of knowledge in policy-making decisions, generally through consultation or advisory assignments; and (3) dissemination of knowledge, the more normal teaching function of the school in regular classes and in special programs such as short courses, conferences, and institutes, both at and away from the campus.

There is no indication of a reduction in the overall need of teaching or re-

search resources in either the immediate or the distant future. The undeniable trend toward organizational and technological complexity, entirely apart from the present emergency, gives emphasis to this assumption. Business schools should not, therefore, lightly be diverted from their major jobs (i.e., research and processing of management potential) unless it is *absolutely essential* to do so.

THE FACULTY UNIT

I have often said that in a time of emergency it would be a relatively easy task to place a business school faculty in Washington agencies within a very short period of time. Indeed the better the faculty, the easier would be the task, for a larger number of "spots" would be available from which to choose in making the recommendation. But the crucial question is: By such separation of the individual from the group, is the overall potential contribution to the mobilization effort increased? If the answer is "no" in any single instance or there is serious doubt, there is need for a long and careful pause. This statement, of course, involves no thought of any strict policy of forced retention of the entire faculty at their present posts. That would be as foolhardy as a lack of policy which might lead to prompt and almost complete dispersal of the faculty — and certainly of some of the most experienced and productive ones.

In view of the indeterminate period of the mobilization, any leaves of absence granted to faculty members should be for relatively short periods and subject to renewal (i.e., a period of one semester or six months). Such an arrangement would provide for maximum flexibility and for maintaining that substantial nucleus number and composition of faculty personnel at the school to carry on effectively its major tasks.

One of the principal weaknesses of schools of business in the past has been an insufficient emphasis on human relations in business. In a number of schools, important initial steps to overcome this deficiency have been taken.

Administration, in the last analysis, is the execution of policies by and through people. Business is predominantly people. It is people working within an organizational framework, whether formal or informal; persons directing their efforts toward an objective, sometimes clearly, sometimes very hazily, defined. The need for prompt adaptation in business during the mobilization will quite evidently increase the need for basic knowledge concerning human behavior and for know-how in motivating persons to desire to work effectively. This need must be kept in the forefront of educational thinking if the business schools are to prepare the best possible products. It is to be recognized that in this new field of education, many of the "answers" not only have not yet been determined but have been hardly approached.

EFFECTIVE COMMUNICATION

A principal weakness of the typical business school graduate has been his inability to express himself clearly, concisely, and forcefully, both orally and in writing. This criticism applies with equal force to the graduate of most university curricula. Time and intellectual and emotional energy saved by effective communication are never insignificant; they may reach a most sizeable proportion. In a period of necessary and quick change, such as must characterize the current and future mobilization, the great advantage of effective communication is increased. Research for new knowledge and more effective use of present knowledge of communication are imperatives for business schools as well as for business management itself. This is an area where discontent with the level of accomplishment is and must remain characteristic of a business school which hopes to avoid "dry rot."

There has been a significant trend in evidence during the post World War II period toward giving increased emphasis to the area of production management in the curricula of schools of business administration. The area is now a generally accepted part of the so-called "core" of basic business subjects required in the country's leading schools. That the emergence of this trend should have been so long delayed is surprising in view of the ready recognition of the fact that in our highly industrialized society, in the administration of individual manufacturing firms, the problems involved in making or producing things represent a truly basic area of management concern. Current mobilization demands will surely accelerate this trend. The new emphasis will very likely lead not only to the addition of a "core" course in production where none now exists but also to the addition or strengthening of courses in related skills and techniques, such as purchasing and quality control.

Will this emphasis mean any reduction in manpower and facilities for the courses involving the principles and philosophies of management? There is an almost inevitable temptation to "divert" rather than to "build" during periods of budgetary stress and manpower shortages. However, industry will still have serious problems in the other areas of management, including marketing and finance, and these fields cannot be neglected because of the immediate stress on production.

The significant value of specialized training is clear. There is, nevertheless, a need, increasingly recognized in recent years, for avoiding *undue specialization* in curricula of business schools. The production man, for example, will better perform his own job in a plant if he understands the type of problems facing other divisions of the company. This represents a vital argument for strengthening the full "core" of basic business subjects in the schools of business, even at the expense of deleting some of the highly specialized courses in the curriculum which might perhaps be better learned on an "on-the-job" basis.

Any reduction in the emphasis devoted to education in sound principles and philosophies of responsible business management, of business administration in broad perspective, is short-sighted at any time and even more so in an emergency period. Educational administrations must recognize this fact and act accordingly. Although the analogy is not fully applicable, it is not unreasonable to expect that business schools which instruct students in production should be able to devise methods for increasing the overall value of their own output or "product" as a contribution to industry and to the country.

PARTNERS IN PROGRESS

If the schools of business are to assist private business not only by undertaking significant research and educating potential administrators but by re-training and up-grading its present management personnel in order that they may meet the new burden created by mobili-

zation orders and loss of staff to the armed forces, there must be closer liaison between firms and the schools. As a long-range matter, too, this is all to the good. In his inaugural address as President of Columbia University, General Dwight D. Eisenhower wisely stated:

> "The school that enjoys a partnership with manufacturing industries and labor unions and mercantile establishments of its community is a better and more productive school in consequence of its non-academic associations. Its influence permeates the entire community and is multiplied many times over while the school itself, energized by the challenges and dynamism of community life, grows and broadens with each problem it helps surmount."

Where research choices are freely to be made, inquiries should be initiated by university personnel which give promise of providing assistance in meeting the urgent mobilization problems that confront the nation. An increase in so-called operational research may be involved, but not to the exclusion of basic or fundamental research. In view of these meaningful opportunities, perhaps more of our graduate faculties should open their minds to a broad definition of appropriate types of research subjects for advanced degree dissertations.

INSTITUTE OF MOBILIZATION

Provided adequate financial underwriting is approved, it is entirely feasible to establish what might be termed an Institute of Mobilization. The purpose of such an institute would be to (1) ferret out the problems of mobilization before they occur as well as to line up presently perplexing ones; (2) accumulate data (including World Wars I and II experience); (3) analyze and interpret data; and (4) furnish significant guideposts for use in solving the management problems of a firm, as well as economic, social, and political problems of the community, region, and nation. A potential "monitoring" of the mobilization effort might be involved. A single school or a group of cooperating schools might create such an agency. The Harvard Business School has already announced a plan embracing a parallel idea.

The group concept is not new; in the development of public administration case materials in the recent past, Syracuse University served as the fiscal agent and managed a field office for a research program jointly sponsored and undertaken by Harvard, Princeton, Cornell, and Syracuse universities under a grant from the Carnegie Corporation. Following such an example would make possible a substantial decentralization of research effort with a consequent retention of key faculty personnel at their university posts on at least a part-time basis.

In conclusion, the conditions most likely to assure that business schools will play their fully productive part in meeting the demands of the period of mobilization are: (1) providing *all* students a thorough grounding in principles, including especially principles of production management; (2) giving increased attention to human relations aspects in all instructional activities; (3) development of an appreciation of and desire for continuous improvement in effective written and oral communication; and (4) maintaining a flexible organization and an attitude alert to constantly changing needs, both research and instructional.

Education for Business Leadership

By C. L. JAMISON

Professor of Business Policy
School of Business Administration, University of Michigan

MANY BUSINESS LEADERS have expressed grave concern over the apparent shortage of men capable of carrying the burden of leadership in business when the present incumbents have retired. Three outstanding facts are responsible for this state of alarm.

THE PROBLEM

First, there is a wide gap between the ages of the top command and the men next in line. These younger men have served too short an apprenticeship in lower levels of management to be ready to take over when their seniors retire.

Second, management of business is becoming increasingly complex. Leaders of the future must have a breadth of education and understanding which surpasses the knowledge that can be acquired from experience gained while climbing the ladder.

Third, subordinate executives must of necessity be specialists, which so narrows their perspective as to give them an unbalanced preparation for general business leadership.

The first point can be explained by the failure to recruit young men of potential leadership ability during the years of depression and the impossibility of getting them during the war years. The second point can be explained by the advance in technology and the need to combat the encroachment on the prerogatives of management by aggressive pressure groups. The third point can be explained by the fact that so much must be known about the functional activities of engineering, of finance, of markets, of human relations, of accounting and other specialized activities that the requisite know-how challenges the mental capacity of even the keenest minds. That is to say, few men have the intellect or the time to acquire much diversified knowledge if they are to perform their specialized functions successfully.

THE EXPERIENCE GAP

Doubtless there are men scattered through the organization of many large corporations who would be able to take over if they now had the knowledge which can be gained only by long and varied study and experience. Since time is short the leisurely training of understudies to take over the reins is impractical. Therefore it has become necessary to administer intensive doses of training. This state of affairs probably is temporary. Top management vows it will not

happen again. Corporations by the hundred are combing university graduating classes for the best men. They have plans for strengthening their executive training programs to insure them a backlog of young executives. All this bluster is commendable but some aspects of the problem have not been thoroughly analyzed.

INCREASING COMPLEXITY OF MANAGEMENT

Business always has faced risks. It has been the responsibility of management to deal with those risks. Competition is as keen now as it ever has been. Changing price levels have not been mitigated by government planning. True the price trend for the past dozen years has been steadily upward, but future prices are much harder to predict because the planners have tried to repeal the law of supply and demand. The risk of change in public taste always is present. And the risk of being left behind by technological advancement puts many a business in greater peril now than ever before. On top of all this managerial policies are under constant attack by political pressure groups and their hired men in government bureaus. Then too, a few ambitious labor leaders make the going hard by espousing socialistic doctrines which many business leaders fear would undermine private enterprise as they understand it. The education of business leaders must be more comprehensive than it ever has been in the past.

NEED FOR SPECIALIZATION

A high degree of specialization can not be avoided. Much detailed knowledge must be had in various phases of engineering, of finance, of accounting, of markets, and the baffling subject of human relations. Specialists in each of these fields are needed. To know all that must be known in any one field challenges the capacity of the best scholars. Therefore a man can not acquire the requisite knowledge without devoting all his time as well as his intellectual and physical powers to one narrow subject. This leaves industry with a group of subordinate executives none of whom has the breadth of understanding to assume general leadership.

SEARCH FOR A SOLUTION

Recognizing the foregoing facts the question now is what can be done about it? Nothing can be done to close the age gap between men at the top and their available understudies. The clock can not be turned back. Apparently the only solution is to select from the group of young specialists ascending the ladder those who show the greatest promise of becoming qualified for general management. They will have to be somewhat despecialized and given an intensive training as generalists. If they are wisely selected they may soon acquire the needed mental maturity in spite of their chronological immaturity.

The foregoing suggestion poses the question of what fields of learning should be emphasized in such a program of intensive education. All of the disciplines that have made up the curriculum of collegiate schools of business after years of experimentation are essential to the education of managerial generalists. Top executives should know enough about marketing to approve sales policies and assume responsibility for them. They should have a similar profound understanding of finance, accounting, labor relations, the techniques of production, procurement and research. The men who now are making major decisions in business surely have that mental equipment, no matter where or how they acquired it. Added to the orthodox training just outlined is a new talent —the talent to parry the assaults of pressure groups who are prone to challenge the ability of corporation presidents to manage their own companies. These assaults have awakened business men to a consciousness that one facet of their education needs some polishing. When asked what subjects they regard as most important in educating the managers of tomorrow great emphasis is given to the psychology of human relations. Accordingly psychological consultants are having a field day giving advice to business leaders. Some of it is sound; some of it is specious; and much of it, although paid for, is completely disregarded.

It is a lamentable fact that business men of ability and integrity have made a poor showing in countless encounters with political leaders, government bureaucrats and labor chiefs. It is admitted even by their friends that they have been no match for their interrogators. In defense of business leaders it should be said that their inquisitors are specialists in the art of argumentation. Those gentlemen can be good because they have nothing else to do. Corporation presidents on the contrary have a multitude of other things to do. Since this is a game that calls for specialists, a solution might lie in adding to the staffs of corporations specialists in debate who are just as quick witted and just as well informed as the government men and the labor leaders. Some corporations do have such staff men. But in important government investigations it usually is the president who is subpoenaed. In important labor negotiations labor leaders demand that they negotiate with the head man. The well rounded business leader of the future should have all the qualifications demanded of leaders in the past, plus the ability to defend his policies against outside attacks. This means that he must know a great deal about many things, and must know all things well.

TOMORROW'S LEADERS

The current demand for top executives can be filled by training as quickly as possible understudies for leaders who are approaching retirement, and also the training of understudies for those understudies. The former group must be selected from promising specialists now in the employ of the corporations. For them a postgraduate program of education must be provided, not altogether to despecialize them but to give them additional knowledge and to polish all facets of that knowledge to equal the brilliance they have been displaying in their specialty. But where is this education to be acquired? How will the knowledge be imparted? How long will it take?

A large number of corporations maintain what are termed executive training programs. The least adequate of these programs are little more than a pious hope that men who are moved around from department to department will acquire by osmosis an understanding of the numerous activities of the business. The most adequate programs provide specialized full time instructors, with occasional lectures delivered by top executives but usually written by ghost writers. Library readings are assigned, class-room work is required, while a planned tour of duty in selected departments affords laboratory experience. These courses in general are intended to orient newly hired college graduates in the business to which they are expected

to devote the rest of their lives. After the completion of such a course the trainee is channeled into some specialized field. The best organized courses serve their purpose admirably, but they fail to fulfill the purpose of training generalists for top command.

Presumably only men in positions of general management have enough knowledge to teach their understudies, and even they decry their ineptitude in dealing with all the present day complexities. But even if they should assume the role of teacher, it does not follow that they would be good teachers. Anyway, they can give very little time to it.

An alternative source of instruction is existing educational institutions. At this point skepticism may be expressed. A ten thousand dollar professor if he knows enough to coach a hundred thousand dollar executive should himself be a likely candidate for the executive position. However, other qualities than knowledge are needed in a business leader. Personality, enthusiasm, drive and stamina are essential qualities of leadership. The executive in training presumably has these qualities. Now if he can absorb the wisdom of a group of highly specialized professors he should be prepared for something more than any one professor can do. His preparation may not be complete but it probably is the best that can be devised.

OUTSIDE TRAINING

Should the training of prospective executives be undertaken outside the establishment, it means that the trainees must be absent from their jobs. Having already become an adjunct to the business, they can not well be spared. Why can they not study while carrying on their present work? From the student's point of view such an arrangement has the advantage of allowing him to earn his full income while fitting himself for something better. Evening courses in an accessible university offer facilities for education without disturbing the students' daily routine. Evening extension courses have merit. They have been offered for many years and thousands of working men and women have benefited from them. Not infrequently an evening school student has accumulated enough credits over a long period of years to earn a degree. But education for top management is not ordinary education, to be acquired from ordinary textbooks and uninspired teaching. Although a few universities are offering courses in the evenings or late afternoons pointed toward broadening the education of executives there are obstacles to the full realization of the objective. In the first place the students do not spend enough time at it in any one week to progress very rapidly. In the second place it is hard for them to concentrate on their studies because they can not throw off the worries of the day when they enter the class-room. In the third place fatigue at the end of the day weakens their alertness. In many cases pressures at the office may interfere with regular attendance.

The objection to extension courses can be overcome by granting leaves of absence to executives who have been selected for advanced training. Then they can take up residence at a university and devote all their time and energy to their studies. By living with fellow students much can be learned by interchange of ideas and experiences. Courses for advanced executives are being offered at a few universities and undoubtedly are more successful than extension courses. Certainly uninterrupted study gives the student a better opportunity to profit from his education.

ADEQUACY OF CLASS ROOM TEACHING

Since each hour spent in school is precious to an executive on leave of absence, no time should be wasted in purposeless pursuit of useless knowledge. That fact places a great responsibility on planners of the curriculum. Some educators believe that the case method of instruction is preferable to the lecture and text book method. The effectiveness of either approach depends upon how good the cases are and how good the lectures and text books are. Cases which are sufficiently comprehensive to be worth while are hard to compile. The strongest argument for the case analysis procedure is that it trains the student to think. The presumption is that any executive selected for advanced training already has demonstrated his ability to think. Moreover, the objective in sending him to school is to broaden his understanding of all the problems of business beyond his line of specialization. Cases may not be the most efficient way to accomplish this.

The alternative is lectures and text books. Teachers who are well enough informed to handle advanced courses in the making of business decisions are not numerous. Text books which are not padded with inconsequential material are not too plentiful. However, instruction of a high order can be offered, and is being offered in a number of institutions by mature teachers who have had contacts with business either as consultants or researchers. Aided by good libraries courses of instruction that are efficient and inspirational can be offered. It is important, however, that the teacher of postgraduate management courses have adequate time to prepare his material. One deterrent to successful executive education is the fact that most professors are obliged to teach degree candidates and must relegate to a side line the teaching of executives.

A PROPOSED SOLUTION

Industry has a big stake in the training of its future executives. So much can be lost if competent executives are not forthcoming that each dollar spent now to foster their education may save many dollars in the future. If the idea should be accepted that the training of executives who have taken up residence in a university can produce the best results in the shortest time, industry can well afford to give financial support to such universities as are selected to do the job. Professorships should be created that will enable a selected group of competent teachers to do nothing else but prepare and teach the desired courses.

Two objectives in management education must be recognized. The pressing need at the moment is to broaden the knowledge of executives already well along in the hierarchy of managerial organization. Industry can not wait for young students now following degree programs in various colleges to gain practical experience and maturity. But in later years the problem will be faced of making generalists out of the trainees now being recruited from graduating classes. Their education certainly must be supplemented when they reach the time of transition. Therefore any experience gained from experiments in quickly educating mature executives may be helpful in perfecting an educational process for all future executives.

Business men at times have criticized collegiate education for business because

too much emphasis is given to specialization. Yet men just out of college can not be immediately inducted into general management positions. On the contrary they are sought to fill positions in engineering, accounting, selling or some other specialized activity. Although a number of collegiate schools of business offer advanced courses in policy formation, few students elect the courses, believing that their time can be more profitably spent adding to the preparation for their specialty. They are not unwise in this decision, because many years will elapse between the time they enter industry and the time they will have climbed far enough to be admitted to general management. What they may have learned in college about general management will have been forgotten in the meantime.

The training of youths in college for general management may not be as practical as it would be in later years when they are ready for it. Nevertheless, organized education in administration such as that offered in graduate curricula is the most efficient way to give top executives a well balanced understanding of leadership responsibilities. Can a compromise be found between exposing them to the learning too early in their lives, or leaving them to their own resources to pick up what they can as they go along? From the immediate objective of bridging the age gap by sending prospective top executives back to college there may be evolved a second objective of including in the plan for careers a return to college in middle life of men who are to be groomed for top management. Such a plan might become standard practice in the future. It would require the establishment and financing of a few super-graduate schools of business administration. The equipment of existing schools could be used, but a faculty of carefully selected teachers should be charged with the teaching and relieved of all other responsibilities. In the end some permanent good may come from the present dilemma.

Education for Management in a Mobilizing Economy

By G. L. BACH

Dean, Graduate School of Industrial Administration,
Carnegie Institute of Technology

THE MOST DISTINCTIVE characteristic of American management over the past century has been its ability to adapt imaginatively to a rapidly shifting environment of new wants, new technological developments, new products, new social groupings. It has been the ability to face up to a never-ending host of new problems, to solve those new problems, and to learn in the process how to do it better next time. This has been true throughout the unprecedented 19th-20th century growth in real output of the American economy—new products, new processes, new areas have been the essence of our growth. It was spectacularly true in World War II, when, on the foundations of modern science and technology, incredible production goals were achieved in a matter of months, and when newly designed complex military equipment was put into mass production almost overnight by the standards of the rest of the world.

This, in my judgment, is the major problem of American management, today in the mobilization period and tomorrow in war or peace. The problem is not how to do yesterday's work better, but how to size up imaginatively ever new situations, to get the new jobs done well and economically, and to learn in the process how to tackle still better the now unforeseen problems of tomorrow. I don't know what those problems will be — in production processes, in new products, in sales, in labor-management relations. But I am confident of one thing. They won't be the same as today's problems, and the industrial executive who tries to solve them with yesterday's and today's "answers" will find his concern sliding backward in the profit parade and in its contribution to a better society for us all.

WHAT CAN PROFESSIONAL EDUCATION DO?

If this is so, what is the greatest contribution professional schools of business and industrial administration can make in the present period? No one knows today how long the present semi-mobilized economy will be needed — possibly three years, possibly thirty. But if the preceding argument is correct, the answer is pretty much the same either way. Our primary contribution as schools for training *professional* men is not to teach masses of current facts. It is not to develop skills in today's techniques, or to become intensely "practical" in detailed training for particular mobilization jobs. These are all important functions. But the primary function of the professional school must be to train students' minds to operate effectively and independently in sizing up and handling new and unforeseen situations. Even in the press of mobilization, good technicians are a dime a dozen in comparison with men who can bring to bear on management problems imaginative, well ordered minds and a real grasp of *fundamental* knowledge.

All we educators like to say that we teach our students "to think for themselves." I would emphasize still more the need to give the student a sound foundation *for continuing to learn for himself from experience after graduation.* The faster the world changes—and it moves at a terrifying pace in a quasi-war period like the present—the more important is emphasis on the potential business leader's ability to keep on learning from experience. For the faster the world changes, the less he can take away from school that will be directly usable, the more he must rely on a few fundamentals well learned and on an ability to keep on learning for himself in applying those fundamentals to the special problems of the future.

This sounds fine. But industry can reasonably ask: *Specifically* what can a professional school of industrial administration do to help develop this type of man for management, and do it soon enough to help in the years immediately ahead? We in the School of Industrial Administration at Carnegie believe a professional school can and should do the following specific things:

(1) It can provide a training that emphasizes thorough and integrated understanding of fundamental knowledge in management, economics, and science-engineering.[1] In a world of rapid change, unless an administrator has a firm grasp of fundamental knowledge, principles, and basic skills to serve as a framework for analyzing diverse problems, he will soon be lost in a maze of facts and details. Thus he must have a firm grasp of fundamental knowledge in production, finance, human relations, and each of the other major management areas. But only a little in each of these areas is truly fundamental, and if his mind becomes cluttered with transient facts and details in these fields, he becomes a mere technician. His ultimate growth potential is drastically reduced.

(2) The professional school can help develop an habitually orderly, analytical approach to the exploration, definition, and handling of managerial problems, in whatever area or context they may arise.

(3) It can help develop a habit of always trying to learn from experience, of always being alert to examine new (even radical) ideas and ways of doing things. And it can help develop skill in learning from what the man does, what he hears, and what he sees, on the job and off it.

(4) It can help give the student a thorough understanding of the whole economic and social system, and to develop the same imaginative but orderly way of thinking about public and social problems as he uses on his managerial problems. No delusion is greater than that of believing the management of the future can retire comfortably behind its factory walls and let someone else worry about the rest of the economy, the government, labor unions, and booms and depressions.

(5) Lastly, a professional school can help the student develop a real independence of thought and maturity of character that will give him a firm foundation of moral and ethical values on which his future business and personal judgments must ultimately rest.

RESEARCH AND THE JOB OF MANAGEMENT

The weakest link in the argument above lies in the inadequate knowledge we have as to what is truly fundamental knowledge and principle in the field of management. Careful analysis of management and its various facets has given us many insights into what is the gold and what the dross. But business administration is a new profession. It still operates heavily on rules of thumb and hunches, often unnecessarily so. It is a profession that is growing up rapidly. A crucial part of that growth must be the amassing of careful scientific analysis and research to lay bare what is principle and what hearsay in management, what is fundamental skill and what transient practice.

I am personally convinced that careful, fundamental research in the management fields over the next half century can and will vastly improve our present knowledge and skills. Management today is in many respects where engineering was a century ago—a field of many intelligent practitioners operating largely by tradition and cumulative experience but with little clear-cut structure of principles. Many fine bridges and machines were constructed a century ago; yet the enormous advantages from modern basic science and highly skilled engineering are obvious. The parallel may be suggestive.

Basic research has already taught us much about more effective human relations in industry. Yet we still know very little on a dependable scientific basis about the efficiency of different administrative arrangements under varying conditions. We now use statistical quality control to give us more reliable quality results at lower control costs than were dreamed possible a generation ago. Yet the area of industrial applications of mathematics and statistics is hardly scratched; vastly more mechanized production control systems are around a fairly near corner. Opportunities for fundamental and useful research in management are legion.

In a mobilizing economy, rapid development of more effective production and general management is at a special premium. In such an economy the case for extensive basic research in the entire area of management responsibilities is doubled. Industry itself can be counted on to do something, especially in the application of research findings. But the whole idea of research in administration is far behind the now accepted ideas of industrial research in chemistry, physics, engineering, and related areas. As in the development of the physical sciences and engineering, educational institutions probably must take the lead in original basic research in the area of management, especially since much of this research will inevitably appear slow and impractical—even "long-haired." Moreover, many findings may well be disruptive for long-established patterns of business operations and the men who stand for them.

American management will be highly skeptical of basic research in this field for many years, just as it was skeptical of the usefulness of early research in the basic physical sciences. But operating business concerns themselves must be the laboratory for much of such research. Without their cooperation, progress will be difficult or impossible. I believe earnestly that both the professional schools and business leaders have a fundamental responsibility to see that the small beginnings of basic research in the management area are developed as rapidly as possible, and that they are not shunted aside by the immediacy of day-to-day mobilization problems.

[1] Carnegie's program in Industrial Administration is somewhat unique in that it combines training in engineering and management in its undergraduate program. In its graduate program, it accepts only men who already have B.S. engineering or science degrees. The goal is management training for men who have a sound grasp of modern engineering as a basis for going on to management positions in industry. The production area provides one obvious meeting place for engineering and management, and many students enter industry through this area.

LONG AND SHORT RUN

Is the pay-out period of this program of education and research short enough to make it a good investment today? I believe it is, for two reasons. The first is that I suspect we are in for a long pull of semi-mobilization. If this is so, the most short-sighted thing we could do would be to give up our fundamental training and research goals in the thought that they can be restored tomorrow when we return to normalcy. Potential managerial ability is one of our scarcest capital assets.

The second reason is that all the evidence I know supports the proposition that the pay-off on sound, fundamental management training is very rapid. In every case I know of, the man who is soundly trained in fundamentals rather than more narrowly in the detailed techniques of a particular job (such as time and motion study or accounting) has overtaken the more narrowly specialized man *at his own specialty* in a very short time—six months to a year. Thus, diversion of our professional schools to special spot training for particular mobilization skills would be an illusory gain, even in terms of short-term objectives. For men destined for ultimate managerial positions, the long-run and short-run jobs of professional education fortunately appear to be the same.

Integrating University and Adult Education

By C. CANBY BALDERSTON

Dean, The Wharton School of Finance and Commerce,
University of Pennsylvania

SCHOOLS OF BUSINESS administration, of which 70 are members of the American Association of Collegiate Schools of Business, offer both graduate and undergraduate education in business at the collegiate level. These Schools are making a direct impression upon the quality of management. Since the Wharton School offers both graduate and undergraduate education, it gives attention to the respective roles of these two programs in advancing the art of managing.

An undergraduate program in business provides a steady flow of men equipped to move up through the executive ranks and to be fitted into such posts as may open. These graduates are not to be distinguished markedly from college graduates in general except that they indicated a preference for business when they selected their course of study. In a collegiate school of business they obtain a well-rounded general education, together with some specialized skill or knowledge in one portion of business administration, such as accounting, finance, marketing, or management.

The students who apply for admission to a graduate school of business engage in more severe competition to become enrolled. The selection process tends to use the rifle rather than the shotgun; moreover, these students have greater maturity than undergraduates.

Whether college education for business is secured at the undergraduate or graduate level, the product is typically one equipped with some specialized training supported by breadth of understanding gained from an effort to integrate the various disciplines to which he has been exposed. He is useful to business because he has a judicious mixture of liberal and business education, and above all an understanding of the world trends that motivate men and influence their actions.

It is to such schools that executives of long experience should return when they have gained experience in one or more activities and are ready for further broadening to fit them for administrative duties. To this end, schools of business are undertaking adult education of many forms. Added to the traditional evening courses are special conferences ranging in length from one day to several weeks. The Wharton School runs conferences on such subjects as labor arbitration. The Institute of Local and State Government offers weekly conferences on every phase of local government operations. These conferences fill a role of significance at the moment because of the new and challenging problems faced by companies, especially in production.

IN-SERVICE PROGRAMS

There is room also for training programs for executives released by their corporations for in-service programs, like the Wharton School's two-week conferences each June for time-study men and for top executives. The executive conference deals with problems of coordination and policy formation. In 1951, the Wharton School will hold a one-week conference in collaboration with the Investment Bankers Association, and a six-week conference in collaboration with the University's School of Education, the Life Insurance Institute of America, and other agencies. The latter, held for the second year, is designed to help school teachers and educational executives develop more effective programs of family thrift education at the secondary school level.

In summary, the fact that our national crisis is of uncertain duration means a continuance of the long-term tested programs of our schools of business. But on top of their regular work is being superimposed a great variety of activities commonly known as "adult education."

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Management and the Engineering College

By THORNDIKE SAVILLE

Dean, College of Engineering, New York University

MANAGEMENT and Engineering have, for some time, been close companions in their respective spheres of interest and activity. Cross fertilization between the bodies of managerial and engineering knowledge has been extensive and mutually beneficial. Yet there are few, if any, areas in which these two are as interdependent as in the task of contributing toward higher utilization of national resources.

At any time, the successful solution of problems of "utilization" is one of management's prime responsibilities. In emergency periods, this becomes an even greater challenge to managerial skill. In this endeavor engineering principles, techniques, and personnel have shown themselves as one of management's most reliable allies.

Particularly useful in this respect have been such typical results of good engineering education as:

—the engineer's training in analytical thinking;
—his ability to ascertain facts;
—his talents in research dealing with machines, production, and men;
—his skill to construct a smoothly operating unit from individually designed components,
—and his inclination to work as a member of an organization, since engineering generally represents group effort as contrasted to individual practice as in most other professions.

TIME MARCHES ON

To such engineers as Taylor, Gantt, and Gilbreth, the engineering profession is indebted for pioneering contributions to the fundamentals of management. Their place in management's "Hall of Fame" rests firmly on their genius in applying typical engineering thinking and methodology to technical as well as to human problems.

In engineering schools these ideas have become the cornerstone of a specialized field which aims at training students for what business and industrial management requires. At first, these efforts, like those of industry, favored the production floor. A representative example of this type is instruction in Motion Study in which Professor David B. Porter started the first course in any United States school at our College 23 years ago. Other subjects were:

Time Study
Wage Incentives
Manufacturing Processes
Production Planning
Plant Layout
Stores and Materials Control
Job Analysis
Materials Handling
Safety
Industrial Management

Before long, the course of studies had prospered into a full grown engineering division in its own right, Industrial Engineering.

In the past ten years or so, progress has been rapid in two distinct ways. The first was the further development of industrial engineering by an expansion of its original concept to include concern with Accounting, Costs, Finance, Personnel Management, Economics, and Statistics. In recent years the latter, with its ramified applications to Quality Control, Merit Rating, Forecasting, etc. has been peculiarly an engineering contribution. The second has been a broadening of the scope of industrial engineering from factory practices to include other business activities. Engineering techniques are proving themselves equally suited to the improvement of systems in clerical operations, the planning and control of administrative work, the layout of offices, and numerous other problems. Many segments of Marketing Research, Transportation, Purchasing, and even Advertising, are now employing engineering techniques with marked success. In addition, such general management projects as Policies, Organization, Control, have given the engineers a new proving ground upon which to test the versatility of their professional aptitudes and techniques.

This development has also brought home to Industrial Engineering the realization that it shares wide areas of common interest with some phases of Psychology, Sociology, and other "social sciences." The synthesis of these disciplines is to be found in the Management Engineer. It is his ambition to find in the crucibles of business practice ever growing opportunities to prove that the engineer can make a weighty contribution toward ever greater utilization of natural as well as of human resources — in periods of peace as well as in emergencies.

BUSINESS NEEDS GOVERN COLLEGE ACTIVITIES

At all times, the New York University College of Engineering has strived to place at the disposal of its students in Industrial Engineering such laboratory and research facilities as will enable them to obtain a practical grasp of the things which their future industrial and business life has in store. It is realized that in the field of management, the real laboratory is the factory, the office, the show room, the construction site and all the other places in which business is conducted. No college or other laboratory can hope to adequately reproduce such surroundings. However, to the extent to which it is feasible, attempts are made to use the case method by building scale layout models of shop departments and offices, constructing fixtures, analyzing books of accounts, arranging arbitration sessions, and utilizing other factual problems which the generous cooperation of many firms has made available to the faculty for use in the

Work Simplification Laboratory
Gage Laboratory
Time Study Laboratory
Machine Shops
Factory Planning Laboratory

Accounting Laboratory and Human Relations Workshop

In these and in many special laboratories, a number of research projects are carried on. A selection of those undertaken during the past year and of interest to management, might include—

- —a human engineering project for the Office of Naval Research,
- —a program of research, development, and testing in the field of prosthetic devices,
- —studies of equipment replacement policies and accounting in industry,
- —continuation of the research project in the field of Management Control,
- —The Society for Advancement of Management sponsored project on Rating of Time Studies, the results of which are already well known to the readers of this journal.

These research and laboratory facilities have long been used widely by business and government since practically all of them came into being in response to existing problems in practice and on account of industry's interest in their solution. The current emergency period, of course, increases the demand for such investigations.

SPECIAL COURSES

Just as the long-range plans of the Department of Industrial Engineering had anticipated such developments and made appropriate provisions for them, so has its policy of providing both graduate and undergraduate instruction in day as well as in evening sessions shown itself well suited for today's necessities. Opportunities for evening courses meet the special requirements of business and its executives and employees when leave for educational purposes is not easily obtained, nor perhaps warranted.

The three Management Round Tables of the College of Engineering have increasingly been serving the needs of business since their initiation in 1946. These series of ten full day sessions devoted to special aspects of business management have enjoyed wide popularity because executives have recognized in them a direct pipeline that brings to their companies the latest management thinking and techniques on a variety of problems. The Round Table on Work Simplification was organized to prepare industrial and commercial executives to launch, in their own firms, a program for higher output at lower cost; its counterpart on Quality Control pursues a similar aim in that field, while a third Round Table devotes itself to top management problems.

The response to these offerings has been so heartening that the College of Engineering is preparing, in collaboration with other units of the University, a new series of management training offerings which will vary in length from fifteen two-hour sessions to a series of thirteen weeks of full time Seminars and Workshops. The different programs address themselves to different audiences, including junior executives, supervisors, middle, and top management.

MILITARY MANAGEMENT

While serving civilian needs, those of the military have not been lost sight of. At the request of the Armed Forces, the College of Engineering has been giving instructions in the field of Management on the graduate level to a number of groups of Army and Air Force officers. An unique development has been a course in "Military Management" added to the advanced ROTC curriculum. The outcome of this experiment will be watched with interest by military agencies as well as in educational circles.

This brief outline may be of interest in indicating the means by which one of the earliest Departments of Industrial Engineering in this country has approached its problems and continually widened the scope of its undertakings. Such an account would be incomplete without mention of the increasing collaboration which the Department enjoys with other units of the University. Engineering alone, even a well rounded curriculum in industrial engineering, cannot provide the comprehensive scope of treatment which business and industry need for the training of their future executives. But a great University is peculiarly adapted to provide such a scope if the offerings of its various schools and colleges can be coordinated to this end. The collaboration which the College of Engineering enjoys through its Department of Industrial Engineering with other units of the University is perhaps worthy of more extended discussion than can be given here. Suffice it to say that in cooperation with the Division of General Education (reaching those not primarily concerned with work toward an academic degree), with the School of Commerce and Graduate School of Business Administration (providing highly) specialized non-engineering courses), and even with the Medical School (providing work in industrial hygiene, etc.), there is developing here an enterprise in general service to business, industry, and the military services which is believed to be unique, and which it is hoped may constitute a significant contribution to higher education in the complex realms of management and engineering.

Program for Evening Courses

By DR. ROBERT A. LOVE

President, Association of University Evening Colleges

THE ASSOCIATION of University Evening Colleges, embracing 76 major institutions and serving a student body in excess of 500,000, has already launched a program designed to meet the current manpower shortage. The administrative units through which graduate and undergraduate programs, as well as non-degree courses actively engaged in business, are offered, AUEC members are harnessing their considerable resources to provide trained men for all levels of industry.

The AUEC program is aimed at overcoming a condition more and more in evidence—an acute shortage on the managerial level, where effective men were scarce even before the present crisis. A whole generation of workers on the "thinking and planning" level was lost

during 20 years of depression, war, and sellers' markets. Now, in the face of a loss of 3½ million men to the armed forces, coupled with the need for 50 billion dollars in war production and a desire to maintain most of our regular civilian output, the problem of rapidly training efficient management personnel presents a real challenge to the American educational system.

But it can be done. To facilitate training on every educational level, the AUEC has devised and put into operation a unique "network" system of cooperation among its membership. The aim of this system is to enable any member institution to obtain the course content and all related educational data of any course that has been developed by another member. Courses in retailing, salesmanship, food, and other programs suitable to the era just passed have already been channeled out. It is planned that courses relating to present needs, such as the recently inaugurated 450-hour program in "Production Planning and Control", developed by the Evening and Extension Division of The City College School of Business, will soon be available for general distribution wherever they are needed.

When it is realized that AUEC members have several hundred "defense" courses, ranging from 30-hour courses in "Time and Motion Study" to a 450-hour program designed to make production men out of recent engineering graduates, it will be seen how this "network" system will expedite the training job throughout the country. And, of course, these courses represent offerings by the graduate, undergraduate, and non-degree divisions of the member institutions.

In developing new training programs, AUEC members investigate the needs of business and then build a program to meet those needs. Our Evening and Extension Divisions have valuable experience in working cooperatively with business organizations to design and present training programs. A recent survey showed that over 400 trade associations have collaborated with colleges (98 with the City College of New York alone) and that 100 more desire to do so. Thus 500 trade associations have indicated to the AUEC that they are ready to collaborate with educational institutions along such lines as drawing up curricula, arranging field trips, providing guest speakers, and contributing various other practical services. Experience has proved that education geared to meeting the needs of business can have gratifying success.

From the studies of AUEC, as well as from the City College's work in cooperating with business, I am convinced that, in addition to partaking in the "network" system of exchanging educational information, graduate schools can contribute heavily in the present crisis by grappling with vital research problems. By attuning their research to the immediate needs of business and finding out *what* must be done and *how* it can be done, the graduate schools can perform an enormous service to the business community.

The AUEC has set up machinery to implement rapid and practical training of managerial personnel. At its roots is intimate cooperation with business groups. The time is ripe for cultivating this cooperation in non-degree, graduate, and undergraduate divisions and raising it to a level never achieved before. There can be no doubt that education and industry, working hand in hand, *can* develop the personnel required for the defense effort. Moreover, the apparent willingness of both sides to cooperate bodes well for increased effectiveness throughout the business structure in the years to come.

A Co-operative Course in Advanced Management

By RAYMOND WALTERS
President, University of Cincinnati

How can a university aid business executives in their approach to current problems, including those growing out of the present national emergency? An attempt to answer this question is being made by the University of Cincinnati by means of a co-operative course in advanced management for executives in the Cincinnati metropolitan area, given under the auspices of the University of Cincinnati College of Business Administration. Members of the two classes who have taken this course during the current academic year are unanimous in expressing approval and praise for the enterprise.

It should be made clear that the University of Cincinnati College of Business Administration provides a regular course in the field of business management for its undergraduate students.

The students in this advanced project are not only mature men, — they are high-ranking local business executives. The limited membership (14) of the first semester class included two presidents, six vice-presidents, a secretary, a production manager, a director of chemical research, an airport manager and an administrative assistant.

In organizing the course the College of Business Administration faculty was assisted by an advisory council of top Cincinnati business executives and by a promotion committee made up largely of business men who are active in the Society for the Advancement of Management. The course is novel in that, following a University of Cincinnati educational doctrine, it is on the co-operative basis. The members of the course are not in residence on the campus as in other advanced management courses, notably that offered by the Harvard Graduate School of Business. They spend the mornings in their offices and come to the University in the afternoons. This permits them to keep in regular touch with their businesses.

TOWARD GREATER RESPONSIBILITIES

The general objective of the program is to enable business executives to widen their understanding of overall manage-

ment, thereby becoming better qualified to perform their present duties and to assume greater responsibilities.

The subject matter of the course has been developed under the following main headings:

The function of business and the responsibility of the business man in the American economy; qualifications of the business executive; policy making, administrative practices, organization procedures, overall managerial controls, production, marketing, and financial management; labor relations, public relations; government relations.

Such questions are discussed as: How can the American economy be kept functioning in a rapidly changing environment? How do social, economic, and political forces influence an executive's policy decisions? How are world politics affecting current business conditions? What is the impact of government regulation on business? How is business concerned with national budget requirements? How can business best adjust to the current national emergency?

Each class begins with a lecture period, followed by a round-table period. Classes are held from 2 to 5 P.M., three days a week for a twelve-week session. Lectures are given by faculty members of the College of Business Administration and by guest speakers from industry and business.

PRODUCTION MANAGEMENT AND BUSINESS ADMINISTRATION

The University of Cincinnati College of Business Administration, recognizing the need for training in the production management field, has, for a number of years, offered a curriculum leading to the degree of Bachelor of Science in Industrial Management. No fundamental change is planned in the curriculum leading to the degree of Bachelor of Business Administration, which covers the principles and philosophy of management in their broader aspects. The Cincinnati doctrine maintains that the business man vitally needs knowledge of principles and philosophies underlying business and likewise an understanding of our economic, political, and social life.

Part II—Executives

Cooperation Between Industry and Education

By HARRY A. BULLIS
Chairman of the Board, General Mills, Inc.

THE ABILITY of American business to apply the proper management techniques to the great unsolved problems of the future will be measured by the yardstick of cooperation between business and our institutions of higher learning.

To help us develop the most skilled management in the history of America, we depend upon education to deal us some aces. We, in turn, can accomplish a lot by working more closely with education in discharging the obligation to society that we both share.

Consider the field of medicine. There we have a striking example of what can be accomplished when a profession and education work closely together. Our medical schools for many years have been pioneers in research and the dissemination of new findings. The medical profession stands high in public opinion and its teachings on health are a part of the education of every child.

Similar cooperation exists between the legal profession and our colleges of law. The same thing can be true of the relatively new colleges of business and commerce.

Educators and students might consider their role as friendly and able critics of business and business practices. Criticism should be straightforward and hard-hitting where necessary, having in mind the economic interests of the nation. Such constructive criticism will help business to better understand its own practices and objectives.

Similarly, schools of commerce can understand research aimed at developing techniques necessary for industrial progress. Curricula might give more consideration to the general subject of business responsibilities to the whole society, aside from the detailed specialties of accounting, financial management, market analysis, and so on. Badly needed, among businessmen of tomorrow, is a greater clarification and more understanding and positive confirmation of proper limits as well as the full meaning of managerial "social" responsibility and "social" leadership. It is this great over-all responsibility, especially to stimulate sound education and understanding, that may be the key to the future of business in this nation.

MEETING THE CHALLENGE

Business, for its part, should draw closer to education. There is no better place to begin than through the schools of commerce. I visualize more joint educational projects, more cooperative enterprise between business and education in this field. I can see both elements profiting, one from another, and in the end the advantages going to all the people. This is a largely virgin territory, but here, nevertheless, is a challenge vital to the future of the American enterprise system.

The Education and Development of Executives

By LLOYD H. DALZELL
President, Dalzell Towing Company, Inc.

THE INDUSTRIAL PROGRESS of the United States during the last half century has been achieved principally by finding better ways to produce and distribute better products with better tools.

To guide us in our constant search for improved methods and products we have invested billions of dollars in research of all description, ranging from time-and-motion studies to the most complicated experiments in the fields of chemistry and invention.

As a result of our vast scientific research and the industrial progress which inevitably has followed, we enjoy today the highest standard of living in the world.

But in management's eternal quest for industrial progress we have largely overlooked the human factor. We have engineered better production and distribution methods, better products and better tools with which to make them, but we have conducted very little research into the techniques which will produce willing, cooperative, enthusiastic workers right down the line. In other words, we have neglected our *human* engineering and in doing so we have overlooked a factor which has an important bearing upon profits.

Here is an actual, if perhaps extreme, example of what can be accomplished by human engineering: Company A's products were excellent, its sales force aggressive, and its market almost unlimited. But management, when it considered its plant workers at all, regarded them as 2,000 faceless people who constituted a flood tide at 8:00 A.M. and an ebb tide at 5, and who turned out as few of the company's products in between as they felt they could get away with.

As a result of management's unenlightened attitude and the consequent low morale of its plant workers, per capita productivity was poor; waste was excessive; personnel turnover and the absenteeism rate were high; and the accident rate was entirely out of line. This situation was costly for many reasons: Poor productivity resulted in an excessive backlog of unfilled orders, in slow deliveries, and in disgruntled customers. Excessive waste constituted material paid for and thrown away. High personnel turnover slowed production and increased training costs. Production also suffered due to the high rate of absenteeism, and of accidents — and the excessive accident rate adversely affected insurance costs.

CONSTRUCTIVE HUMAN RELATIONS

Then two years ago someone told the management of Company A about human engineering in business, or the techniques of producing willing, cooperative, enthusiastic workers. Gradually management began to see its employee group as 2,000 individual human beings with wives and husbands and children and problems. It discovered that Pete lived on X Street, had a daughter seriously ill in the hospital, found it difficult to make ends meet, and was worried about the future. And management concluded that Pete's situation was little different from that of the president himself, who didn't enjoy his personal worries and heartaches any more than Pete did. So the company began to consider the welfare of its people and to do little things that would contribute to their sense of security, dignity, and general well-being. For example, it sent flowers to Pete's daughter at the hospital, and arranged for flowers to be sent to other employees or their children in similar circumstances. It asked its foremen to give those under them an occasional pat on the back for jobs well done. It wrote a letter to employees every month about things they might like to know concerning the organization.

The company began to do some bigger things, too, for the welfare of its people. It installed a ventilating fan to clear out the stagnant air in Department B; enlarged the employee parking area; interested employees in organizing athletic teams and provided money for uniforms and other expenses; set up an industrial relations committee to assure a steady flow of new suggestions.

Today — after two years of this enlightened program — you'd never recognize Pete and his co-workers. Morale is high; productivity has substantially increased; personnel turnover is no problem; waste is normal; absenteeism is off, and the accident rate is down appreciably. As a direct consequence, Company A's profit picture is better and its employees are making more money under a profit participation plan.

Certainly the education and development of future executives — whether for industrial or commercial pursuits — would be far from complete without thorough indoctrination in the principles of human engineering; for, as someone has put it, the humanities of business have become as important as its techniques.

Meeting the Challenge of the National Emergency

By GEORGE SCHLEGEL 3rd
President, Schlegel Lithographing Corporation

GRADUATE SCHOOLS of business and similar institutions must immediately recognize their full worth and potential as one vital component part of an overall National Agenda that must be laid down at once for perpetual use if the democracies which the so-called western nations now enjoy are to be maintained.

The present period is too easily called an emergency period. This country is not now in a state of temporary national emergency but it has, unfortunately, only begun to realize that elements of competitive social, economic and political thinking are in such totals in the balance of world affairs today that our governing bodies are now becoming cognizant of their danger.

Graduate schools of the type that existed twenty years ago must realize their curriculums and component parts are of necessity now different. Such schools will never be able to return to the enjoyable conditions that existed a generation ago or even a year ago.

The "cold world war" of today has merely crystallized the fact that for the last thirty years the educational principles inherited from the peaceful Victorian period have become antiquated. We can easily see this by a quick look at the affairs of the world today.

The first consideration of graduate schools is to expand the total number of individuals reached by the influences of higher educational facilities. At no time before, have as many people been required to fulfill the normal requirements of every day's responsibilities. We find, peculiarly enough, that this country is dangerously short of capable executives and we must all now be aware of the fact that executive initiative, from a financial viewpoint, is being destroyed. Graduate schools can restore this missing element of initiative by creating appreciation of proper intangible values in the form of proper appreciation of comparisons that are not monetary.

The number of undergraduate engineers that are the future sources of our production and research success is only fractionally sufficient. Let us take for granted that we cannot increase the number of these sufficiently in the years to come and use our schools more successfully to spread the capabilities of those at hand.

WIDE-SPREAD FUTURE NEEDS

Professional people of all kinds are just as short in supply as executives and engineers. It would, therefore, be most apt that the graduate schools immediately recognize the terrific requirements that the world has for "thinking" capabilities. The schools should teach thinking as a coach would handle an athletic team and the ultimate goal of this teaching would be students capable of spreading such teaching to many more people than can be originally taught.

I believe, too, that every graduate course must begin again to recognize the moral responsibility of what is at hand for the peoples of the world. This is immediately necessary subject matter because it also touches upon the intangible of our daily worldly lives. For some reason, unknown to me, our higher educational institutions today have had a growing tendency to develop too entirely upon the tangible aspects of worldly knowledge and their student bodies have been allowed to neglect the realness of the individual's social responsibilities. This will permit, I believe, a satisfactory approach to a higher general level of intelligence in the shortest possible time. Do we have enough "statesmen" today?

All people of more than individual responsibility today must be increased in efficiency, in effort and in breadth of consideration.

THINKING AND OLDER STUDENTS

The concrete present day requirements of institutions of "thinking" are the proper courses. More and more engineering research of all kinds must be sponsored by industry in graduate schools. When projects of a curriculum have been satisfactorily established, all of the most current educational practices should be relied upon. Visual aids, audio visuals, repetitive audio reception and condensed experience reviews by specialists, must be part of the more exacting approach that institutions must give to individual subjects. The choice of the individual subject, however, must not be allowed to become too concentrated but must be considered emphatically in reverse: shortened approaches to subjects will permit a broadened consideration of related subjects to every research project and problem. I firmly believe that the graduate schools of today should be filled by an ever increasing number of "older" students. They would be students who had the opportunity to become "unlearned": individuals who have become mentally broader because their previous formal learning has become modified by their own experiences in their various fields of effort.

The world and the people in it are now entitled to the full use of all existing potentials. If we are all taught to think properly, in time the graduate schools will be delivering their most powerful broadsides.

Part III—Specialists

Whose Business Is Executive Development?

By STEPHEN HABBE
Senior Research Analyst
National Industrial Conference Board

THE SUBJECT OF executive development has been a hot one for several years. It still is hot, and there is every likelihood that it will continue to be for some time to come. The reasons for this have been explained at length by others, and need only be summarized here.

Executives are in short supply today and many are close to retirement. National surveys show how critical the situation has become.

Executives are important. Some say the most important single thing to know about a company is the quality of its executive personnel.

Executives will cooperate in training if the program is well conceived. The old bugaboo that training is only for youth or for those at the bottom of the promotion ladder has been disproved many times. But a training program for executives must be good. If it is, it will be well accepted by almost everyone concerned.

Companies have a responsibility for executive development. Once it was up to each employee who wished promotion to prepare for it and to bring himself to the favorable attention of his superiors. Now many companies recognize the role they can play in helping selected individuals qualify for advancement. They feel that at least a part of the developmental program, both in terms of time and dollars, should be borne by the company.

Executive development is possible. Enough evidence is now available to convince the most skeptical that it is possible and practical for a company to determine its executive replacement needs and to set about deliberately to get men ready in advance to meet these needs.

Executive development is a must. If a company operates in a market of low competition and feels little concern for the security of the country, it may regard executive training as something superfluous. But any company that is aware of its competitors and of the present threat of international forces, must feel very differently about executive development. Such a company must recognize that the leadership which will be available to our industries during the next decade or two may well spell the difference between the survival and the death of the free enterprise system.

SIZE OF THE PROBLEM

The urgency of the problem is matched only by its dimensions. If 2% of those gainfully employed today are executives, the actual number of executives exceeds one million. This is a tremendous number! Obviously, the question posed in the title of this article is highly academic. We should welcome the help that any qualified person or organization can offer in executive development. Prerogatives are not to be considered. We cannot afford to fiddle while Rome burns.

A number of different groups have identified themselves with executive training. Hundreds of companies have definite, systematic programs. The training they provide certainly represents the most significant contribution being made today in this area. A score of universities now offer management courses for executives, lasting one week to as long as a full year. Other institutions of higher learning hold shorter conferences and seminars for business leaders. In addition, valuable courses are offered by correspondence and at extension centers.

Research has been completed and published by management organizations. Meetings and workshops on executive development have been arranged for an exchange of ideas among company representatives. Consulting groups in many instances have extended their services to include work in executive selection and training. At least one publishing house has an executive reading course for sale.

PLANNING A COMPANY PROGRAM

Not all the work being done in this area is of equal value. Undoubtedly the basic training must be carried on in and by the companies themselves. And only the companies and the individual executives can decide what outside help they wish to use. One company may say: "The university approach is unrealistic. It doesn't fit our needs. We have 200 executives and the university would take only five per year. We'd never get the job done if we didn't do most of it ourselves." Another company might take a very different view. "We think highly of the university course for executives. It supplements our program. It covers basic management subjects much better than we could cover them. The stimulation that our people get from the class discussions and from the informal contacts with carefully selected executives from other companies is worth the entire cost alone." And both companies probably would be right. A program that works for one company might be wholly inappropriate in another company.

A promising characteristic of the present situation is the wide experimentation that is going on. Executive development is still new and not all the best methods have been found. Some plans now in vogue probably will be discarded as new and better approaches are discovered. In another ten years we should know a lot more about executive development than we know today. By 1961 executive development programs undoubtedly will be accepted as normal and essential activities in a majority of companies.

THE EXECUTIVE IN WARTIME

Our country faces an emergency today which is more serious than we care

to admit. Too many people are carrying on business as usual, asleep to the dangers about them. We must rise above our individual interests. We must place the welfare of our country first.

The business executive occupies a key position in the American economy. This is true in a time of peace, and it is even more true in a time of war. Well-trained executives are in short supply today. Many are in the upper ages and cannot be expected to serve much longer. But hundreds of top-notch executives will be needed within the next few months to take over heavy responsibilities in the armed services, in war industries, and in key defense agencies. At the same time their companies must carry on without them, for it is unthinkable that the flow of essential goods should be interrupted.

PLAN FOR ACTION

While the interests of the country must come first, it is to management's own advantage to get its house in order and to make it strong. This cannot be done overnight, but a start can be made at once. And whatever can be done now, should be done. It will help the immediate situation and it will help in the long pull ahead.

The effective allocation and utilization of today's supply of management personnel is imperative. Our very existence may depend upon it! Our ability to accomplish this objective depends upon several things. We must know who our trained executives are. We must know where they are, what they are doing, and what they can do. We must know that they are available, if needed. (But we must not draft an executive for a smaller job than the job he is doing now.)

Also, we must move fast to develop a second team to take over and carry on effectively when the first team is needed elsewhere. Each company can proceed immediately to make an up-to-the-minute inventory of its management family. It can work out a concrete plan for replacing individuals in key positions if and when they must be replaced. These steps alone will serve the national need, the corporate need, and the developmental needs of many younger executives.

Application of Education to Management Functions

By VINCENT A. HOLLNBERGER

Placement Manager, Engineering Employment Service, Inc.

THE COLLEGE GRADUATE finds himself facing a serious problem when he applies his education to a given job, particularly one requiring management potential.

Let us consider the problem of an engineering graduate seeking his first job. He has all the basic training needed to do work in many fields. He talks to different companies about job opportunities and he discovers there are openings for him in various fields. What does he know about these fields? Nothing, as yet, but he is interested in an opportunity to get experience. Has anyone explained what he is equipped to do with his education? Not exactly, but he knows it to be a good foundation for a job leading to management. What field of management would be best? How is one to decide the work that would be most suitable? The answer to these questions is what the young graduate would like to know.

In the past five years, the writer has interviewed over 25,000 young engineers seeking job opportunities. Many incidents occur daily which show a definite need for more vocational guidance. The most common deficiency in these young engineers is their lack of understanding of the jobs that they could qualify for with their education. They do not know enough about the duties performed by others in their profession. There is a crying need for more information in this field. They need someone to explain the various types of work that they are capable of doing after completing their education. They should be told where these jobs will lead to, and how long it will take them normally to reach the management level. Educators can help a great deal by supplying as much information as possible in educational institutions. Job descriptions could be prepared in detail for the prospective graduate to analyze as a possible outlet of his capabilities. Conferences could be arranged with young executives who have experienced the transition period between the starting point and the management level. Perhaps a special course in the final year could be devoted to assisting the student to apply himself better to his vocation. Such information is being supplied by employers and professional employment agencies constantly, but it would be far better if this were learned before the graduate left school.

PERSONALITY AND ABILITY

Personality development is another weakness in the average management potential. Employers are particularly anxious to engage people today who have desirable personality traits for their management trainee programs. They seek potential leadership qualities. They need the ability of self-expression. More emphasis should be placed on education along these lines. If the students realized how important these qualities were to a prospective employer, they would welcome additional education in the form of public speaking, sales, and other training which would help develop more effective personality traits.

The problem of seeking the right field —the most suitable for the individual— is complex. Much has been gained through aptitude tests. But, many improvements can be made over the hit-or-miss method now used by those seeking a future leading to management. Most people, today, seek employment in the field where they received the best grades in school. Or, an individual may have been told of an unusually attractive job by friends and he makes that his first choice. Students should be told in school that the ideal job of working as

an assistant to a top executive is very rarely attained by the recent graduate. They should be informed that, in this age of specialization, they should be extremely careful to choose a position that will give them experience that will be valuable later in life. Many young graduates waste time in jobs that are not profitable, experience-wise. Graduates should know that a good practice to follow before accepting a job is to evaluate it in terms of how it will benefit the individual after three years or five years time.

Whatever field a graduate selects as a specialization, he should get as much information about it as possible through educational institutions, reading professional literature, discussions with advisors and experienced men in this field. If this is done, the young graduate can then make a better presentation of his talents to prospective employers and, as a result, utilize his education in a more effective manner.

Developing Executives by On-The-Job Training

By EWING W. REILLEY
McKinsey and Company

WHAT METHODS have been most effective in helping executives to improve their performance on their present jobs and in giving them the experience and skills required for promotion?

That is a question to which no one has the final answer. The problem it poses is one that involves attempting to influence and mold adults with deeply ingrained attitudes and behavior patterns. If we knew how to do that, we would have a much better world. But even if we have no final answer—and it is unlikely that there is any simple or single method — experience demonstrates that certain methods have produced gratifying results.

ON-THE-JOB EXPERIENCE

We learn best by doing. In fact, it is probably true that mere intellectual understanding can seldom substitute for experience. Therefore, the most successful executive development programs are based primarily on planned, on-the-job experience.

1. *Coaching.* The first step, of course, is to ensure that each executive is getting the most out of his present job. If he is, he functions more effectively on his current assignment and, at the same time, acquires the administrative skills and other experience that prepare him for promotion. For example, he must learn to define objectives, make plans to achieve them, organize the work of subordinates, coordinate the work of his department with that of other parts of the organization, and develop men. Another great need is to teach men to reach out for more responsibility—to get them accustomed early in their careers to making decisions and mistakes.

Here are some steps an executive can take to help his subordinates develop their managerial abilities:

(a) He must define their responsibilities. To train executives, it is necessary to know precisely what their responsibilities, authorities, and relationships are. Each executive must therefore clearly define his subordinates' jobs, release individual talents and initiative, and delegate responsibility and authority. The company's organization guide can be a great help in doing this.

(b) He must really delegate. To accomplish that, he should insist that subordinates accept responsibility and make decisions without running to him. Clearly defined policies create a framework that makes this possible. Insistence on completed staff work—where a subordinate must have a recommended solution when he brings a problem to his boss—also helps. Freedom to make mistakes is likewise essential if subordinates are to gain experience and develop self-confidence.

(c) He must establish performance standards. A number of companies have done a good job on activities that lend themselves to objective measurement. But the same thing can be done for any position regardless of how intangible the duties are, by setting down the conditions that will prevail if the job is well done.

(d) He should teach subordinates to program their work. A good method is to require each subordinate to analyze his activities thoroughly each year and develop a complete set of objectives for the coming year. The objectives should cover every phase of operations. Then the subordinate should be asked to report periodically on how he is progressing in achieving those objectives.

(e) He must let his subordinates know how they are doing, both through day-to-day contacts and through periodic progress reviews. One of the strongest incentives motivating an individual is the attitude of his boss. He must also give or provide help where necessary to correct deficiencies. This involves determining how well each executive is discharging his responsibilities. Those areas where he does not meet *minimum standards* represent his most urgent training needs. Is he *promotable?* If so, what further experience does he require to prepare him for his next job? The progress review procedure we discussed earlier can be very helpful in this connection.

(f) Finally, he must set a good example. For it is well established that men tend to grow in the image of their superiors.

BASIC PRINCIPLES

In developing subordinates, executives should keep the following pointers in mind:

(a) *Explain why, don't tell how*: Subordinates should be given a reasonable explanation of *why* action is called for, but detailed explanations of *how* the assignment can be done should be avoided. Too much emphasis on details of performance creates an impression of lack of confidence in the individual.

(b) *Show confidence*: Real leaders show the maximum confidence possible in their subordinate executives.

(c) *Increase praise, decrease criticism*: Many executives have discovered that they can get better results by increasing the amount of praise. It is, of course, especially important to avoid criticism of one executive in front of the others.

(d) Recognize "nonlogical" motivations: It is also desirable to give considerable weight to psychological or emotional considerations and not to rely too much on factual considerations alone.

(e) *Be a good listener*: The wise executive is a good listener. He gives everyone a chance to have his say.

(f) *Avoid dominating*: The successful executive avoids dominating meetings or people. He steers a middle course between personally dominating a meeting on one hand, and keeping it moving ahead and getting things done on the other.

(g) *Admit mistakes*: The broad-gauged executive is always willing to admit his mistakes. As a matter of fact, the recognized leader of a group will find that this enhances his leadership. Hence, he sometimes goes out of his way to point out his errors.

(h) *Give credit*: An important way to stimulate loyalty, productivity, and morale is to give credit when a job has been well done. The established leader of any group is especially on guard against unintentionally presenting the ideas of others as his own. He strengthens his position by giving credit to others and playing himself down—so long as he does it sincerely.

(i) *Encourage freedom of action*: The development of people requires giving them leeway to build up their own initiative, resourcefulness, and self-reliance. Also, at some stage of an executive's growth, it is advisable to "take chances" on him—to give him an opportunity to make mistakes.

(j) *Be patient*: It is well to show the greatest patience with subordinate executives.

2. *Career Guides.* Another useful technique is to develop a "career guide" for each position. The guide includes a detailed job breakdown of the executives' responsibilities and what he has to do to carry them out. Opposite each activity the guide sets forth what the executive has to know in order to do the job properly, where to get the know-how, and how to learn to use it. This guide can be helpful to an executive in learning a new job and checking up on his performance in an old one. Also, by reviewing the guides for positions to which he aspires, the executive can determine what kind of knowledge, skills and experience he must acquire to prepare himself for promotion. The career guide is also a very useful aid to a superior in holding progress reviews with and coaching his subordinates.

CONSTRUCTIVE LEADERSHIP

3. *"Double-tracking."* Some progressive companies follow the policy of providing understudies for all key positions. The understudy can increase his boss's effectiveness in many ways. The company can also balance executive talents by supplementing them—by giving key executives assistants that are strong where the executives are weak. In the process, the understudy learns his next job "by doing," and he benefits from the coaching of the incumbent.

4. *Job rotation*: Many higher level executive positions require varied types of experience. For example, a chief sales executive should have a knowledge of sales promotion, advertising, market research, and sales planning, as well as experience in direct management of the field selling force. More and more companies are providing this experience through planned job rotation of promising younger executives. To plan this rotation necessitates a careful analysis of the organization to determine which positions lend themselves best to use for training purposes. Some companies, like Standard Oil of New Jersey, have set up special jobs designed primarily for the training values they offer.

Job rotation also involves laying out promotional lines in a way that provides diversified experience. Some companies use experience profiles as a check to see that key personnel is getting the desired experience.

Another important step is to identify the "dead-end" jobs, such as specialists' positions, which have limited promotional possibilities. Then you can see that men with high general management potential are given lateral promotions out of these dead-end jobs and, wherever practical, that such jobs are filled by men who are content to remain specialists. As we all know, certain men derive their satisfaction from growing in stature as technicians or professional men rather than from progressing higher in the organization.

5. *Observational assignments*: Where time does not permit job rotation or where the position does not require it, observational assignments can be used to familiarize executives with the work of other departments.

BROAD GAUGE OBJECTIVES

6. *Consultative supervision*: A number of regular management processes can also produce important training benefits as by-products. For example, various consultative processes, wherein the lower levels of management participate in the solution of top-management problems, are excellent ways to test and develop potential executives. They promote the association of promising juniors with their seniors. They expose these juniors to the bases and processes for making plans and decisions. They also familiarize them with the work and problems of other departments. These methods vary in the degree of their formality. For example, one outstanding company president follows the practice of inviting different promising younger executives to management luncheons where important policies are discussed

and decisions made. More formal methods include *conferences*, of which the Management Counsel Program of United Drug is an outstanding example: *multiple* management, pioneered by the McCormick Co. of Baltimore; and *interdepartment committees*.

7. *Decentralization*: Companies that operate on a decentralized basis find that this facilitates executive development. The manager of a decentralized unit has an opportunity to "be president" on a small scale. He has "net-profit" responsibility for his unit of the business. He learns to coordinate the various phases of the business for which he is responsible. Decentralization is most commonly practiced where a company's sales and manufacturing activities are widely dispersed geographically or where the company is in several businesses with dissimilar manufacturing and sales problems. Decentralization has, however, been practiced successfully on a limited scale within a single plant, office, or store.

Promoting The Idea

By H. E. BLANK, JR.
Editor, *Modern Industry*

WHERE will we find men who are able to manage our business competently and who are willing to pay the penalties of leadership?

Today, for an increasing number of firms, that question looms as far more critical than any other. In fact, for the nation, its answer will inevitably determine the future strength and vigor of our free enterprise economy.

Interest among industrialists in executive development is growing. No longer is their interest mere curiosity. It's definitely of the "let's-do-something-about-it" variety.

To meet the mounting demand for advanced academic training in the art of management, more and more colleges and universities provide for it. There's a steady burgeoning of workshop seminars, forums, and informal discussion groups all focussed on the objective of accelerating the development of fully-rounded executives. Internal plant programs designed to supplement such educational efforts are spreading across the industrial land.

All this activity is healthy — and heartening. But the other side of the coin tells a different story. For every industrial leader who exhibits interest and determination to act on promoting executive development—both within and outside of his company—there are probably 10 who give this matter relatively little attention. Reasons for such apathy appear to range widely over real and imagined barriers—from "We can't afford at this time to have any key executives away from their jobs for weeks on end," a top official viewpoint, to "What's the use? There isn't enough incentive," a junior-grade official viewpoint.

With this country facing possibly its most critical shortage in lack of truly able executive management, it certainly seems indicated that every effort must be made, no stone left unturned, to give promising young executives every opportunity to acquire greater managerial abilities — and to provide their bosses with further incentives to improve their own more mature talents for policy-making and planning.

No product—even the best—sells itself. And no idea — even such worthy and essential ones as this—will get the wide acceptance it needs without active selling by everyone who believes in it. To do that selling job on executive development calls for the combined and increased sales efforts of all concerned with management—the colleges and universities, the professional societies, consultants, magazines and newspapers, and especially executives themselves.

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Administration As an Educational Function

By ORDWAY TEAD

Chairman, Board of Higher Education,
City of New York

ADMINISTRATION AS A FINE ART requires certain kinds of attitude, policies and methods, all of which look to the productive release of human talent. It calls into use knowledge commonly referred to as psychological and economic. It draws upon whatever body of administrative science has to date been formulated. Since there are aspects of novelty in the content of the related fields of study, in the possible applications of their findings, in the personal outlooks and traits required by administrators, and in the procedural side of their work, it is not surprising that an administrative art has not come rapidly into general operative use.

The assumption is reasonable, or at least hopeful, that if administrative performance which looks in this newer direction is to become more general, conscious attention to processes of education and training can be beneficial. Both for present and oncoming incumbents of executive posts, a more serious effort in this direction is worthy of more conscientious trial if administrative adeptness is agreed to be socially important. Indeed, it would seem hardly possible to have too much or too good an education for all who are or propose to be immersed in this indispensable social activity.

There will be those to allege that in administration "there are never enough good men to go around"; and others to doubt whether education can directly be of help in improving this "inborn" artistic skill. It is true of every important calling that the number of topnotch performers is limited. And it is true of our educational efforts for executives that they have thus far been on an experimental and probably not too effective basis. In all honesty, only after a quarter century of beginnings are we coming to see something of the nature of the educational task entailed.

This chapter will therefore raise a few broad questions kindred to the educational aspects of administration. It will not elaborate upon specific training programs, as to which the literature is abundant and rewarding.[2] Some of the vital issues here are (1) the nature of the administrative mentality and of its cultivation; (2) the implications of the educational responsibilities of managers themselves; (3) the problem of the sources for new executives who qualify to be upgraded; and (4) the role of the university in helping to advance the educational assignment here confronted.

Adapted from a chapter of the book, "The Art of Administration." Published May, 1951. Copyright, 1951, by the publishers, McGraw-Hill.

Today business organization requires an imaginative grasp of the psychologies of populations engaged in differing modes of occupation; of populations scattered through cities, through mountains, through plains; of populations on the ocean, and of populations in mines, and of populations in forests. It requires an imaginative grasp of conditions in the tropics, and of conditions in temperate zones. It requires an imaginative grasp of the interlocking interests of great organizations, and of the reactions of the whole complex to any change in one of its elements. It requires an imaginative understanding of laws of political economy, not merely in the abstract, but also with the power to construe them in terms of the particular circumstances of a concrete business. It requires some knowledge of the laws of health and of the laws of fatigue, and of the conditions for sustained reliability. It requires an imaginative understanding of the social effects of the conditions of factories. It requires a sufficient conception of the role of applied science in modern society.[1]

IS THERE AN ADMINISTRATIVE MIND?

It would be untrue to assume that there is something identifiable as the "administrative mind." Many and diverse qualities are needed, along with varying combinations of traits in different settings. Nor is there apparently much of value to be derived from compiling lists of "qualities of leadership" or of administrative superiority which might be analyzed and helped to cultivation. Rather it is perhaps useful to stress certain widely useful traits and interests, the exercise of which can be an unquestioned asset. I refer to: (1) a capacity for clarifying generalization; (2) an operating rather than a promotive interest, or, in different language, a constructive rather than an exploitative approach; (3) some sensitiveness to the requirements of wholesome human relations both among individuals and within groups; (4) a grasp of the importance of community and public relations (local, consumer, governmental and organized labor). If education can help to develop discernment in these areas, it can have great usefulness for the purposes with which administration has to be concerned.

The higher one goes in administrative activity the truer it is that one has to be

All footnote references appear on page 25, 26.

a specialist in the ability to generalize effectively. This means possessed of a capacity to abstract general conclusions out of multiple bodies of not too clearly related facts, and then to think in general terms long enough to translate the correctly formulated generalization, conclusion or solution into the wise handling of some new set of specific, factual proposals. Professor Alfred North Whitehead has well characterized this quality in the following way:

> The modern commercial mentality requires many elements of discipline, scientific and sociological. But the great fact remains that details of relevant knowledge cannot be foreseen. Thus even for mere success, and apart from any question of intrinsic quality of life, an unspecialized aptitude for eliciting generalizations from particulars and seeing the divergent illustration of generalities in diverse circumstances is required. Such a reflective power is essentially a philosophic habit; it is the survey of society from the standpoint of generality. This habit of general thought, undaunted by novelty, is the gift of philosophy, in the widest sense of that term.[3]

That such a talent can be cultivated by conscious study is a valid conclusion, although it is true that the potentialities of individuals in this direction vary greatly and true also that education directed to this end has not thus far been conspicuously successful — in part because this objective has not been sought. Nevertheless, training in orderly habits of thought, in analytical skill, in imaginative induction of hypotheses worthy of test—all this can be educationally more fruitful whenever educators will address themselves to this as a worthy and central aim. Also in this connection, it is important to recall the earlier discussion (see Chapter 8) of the conditions prerequisite to reaching "practical judgments" or decisions. The extent to which past experience with sound decisions can be drawn upon for help in new problem situations is far greater than might be supposed, if the executive has through training become consciously aware of the elements and steps which comprise "straight thinking" as a shared process.

Those who approach participation in business direction from the point of view preponderantly of "banker management," or of what Veblen called "finance capitalism," are not usually those who are deeply interested in or necessarily skilled in administration in the sense here conceived. There are still those in business who are playing for high stakes and quick results, who see industrial and mercantile enterprises as pawns in a game of financial manipulation, who are not unfairly spoken of as "business buccaneers." Promoters and "entrepreneurs" of this caliber do not tend to have administrative interests. They do not usually possess the patience, the human sensitivity and the public outlook to administer well in the constructive, long-range way today required. Fortunately, the demands and occasions of present-day economic adventure lie much less in the field of financial manipulation than in the field of the more sober and steady building of productive unity on foundations of cooperative effort.

Stated educationally, this means that administrative leaders have to come to understand what the central concerns of the administrative process actually entail. The elements of process and of personnel have to be fused into the forwarding of the corporate aims; and "corporation finance" has to be seen as instrumental here and not as a field for the manipulation of securities for selfish ends.

It follows from this that the quality of mind to be preferred is one which is both alert to and interested to capitalize upon those relations of persons together which become productive by assuring their felicitous interaction and by eliciting their loyalty and group morale. This capacity is not stressed to the derogation or slighting of the necessary abilities concerned with process or technology. But the technological approach to management has on the whole been too much in the ascendant thus far; and the time for *a reorientation of focus* is at hand. Technological skills can be hired; and they are by and large easier to acquire than this broader administrative capacity and vision. For the elements composing such capacity vary greatly among men, and conscious regard for human relations is a relatively new phase both in the present generation of managers and in the training for the next generation. There is reason to believe that, with deliberate attention devoted to this phase, both the desire and skill can be increased. But that infallible training methods to assure this improved outlook are accessible cannot be truthfully said. There is undoubted force in the contention of Chester I. Barnard that a highly intellectualized, verbally facile and bookish approach may incur the danger of creating "a strong bias in many individuals against understanding in the field of human relations." [4]

Mr. Barnard interestingly suggests three important areas of study as having value here; and his ideas should be helpful in the training of individual executives and in the approach to formal study in educational institutions. His three points are: (1) "the need for inculcating an appreciation of the importance and of the inevitability of nonlogical behavior"; (2) "instruction as to the nature of general social systems"; (3) "instruction about formal organizations as organic and evolving systems." [5]

One end result of any training, however it may be gained, will combine some genuine fondness for people, some sensitivity to dealings with them, some magnanimity of spirit, some patient capacity to "suffer fools gladly," in the metaphorical language of the Bible. And it will add to these a practical sense and conviction about democratic values, institutions and applications.

The need for top executives to be alert to the external influences which play upon their organizations is today patent. Nor is it a responsibility which can be delegated in any complete way to an officer functionally responsible for "public relations," valuable though such an executive unquestionably can be.

A primary emphasis here has to do with the executive's development of a sense of the public interest—a matter about which business education should have much more to say than has been formerly true. Wise executives are increasingly recognizing that to conceive their obligation solely in terms of reconciling the several group interests within their corporations is not sufficient. In fact and in law a public interest becomes increasingly identifiable. And as its nature and the issues affected by it become identified, there is wide support for the view that in the conduct of economic affairs *this public interest is paramount.* Moreover, this public concern (however vague it may momentarily seem on any specific issue) does impinge upon a variety of important aspects of corporate policy on which executive leaders have to keep an attentive eye. The whole approach here elaborated is, indeed, a defining of the role of administration as it becomes increasingly infused with concern for outcomes which realize a public interest.

The administrative and social costs of

achieving a dynamic and productive peace in organizational relations have been here in review. The emphasis as to such costs has centered on the responsibilities of fostering the creative initiative of all in corporate settings. And that this initiative has to have a twofold source in the work both of managers and labor union leaders has been shown. The preoccupations of these two groups are destined to move functionally closer and closer together. Moreover, the need beyond such joint initiative, with its release of creative power, is for a spirit in both camps of patient accommodation to the essential efforts of social inventiveness which have to go forward experimentally in many individual organizations and industries. The gaining of such experience which tests and establishes the good in new methods of improved collaboration—for managers, union leaders and rank and file—is the basis for the learning and the conviction which are in the public interest. For such learning experience constitutes a finer fulfillment for persons and for their corporate activities. Patience is further required because of the time factor in discovering and putting to use the variegated social engineering capacity which will apply the growing knowledge of that science of man now increasingly available.

It is being grasped, moreover, that the social costs referred to, as helping to bring a public interest into being, are payable in coin which is that of the American realm. These costs are part of our account with the national purpose and promise to bring into operating form and expression a democratic American life. To be in command of the art of administration in this comprehension of its assignment is thus to combine a striving for a public interest as dominant, with a personal career which is building vitalized organizations in their required harmony and productivity. To be a good administrator is to share a vital social function which offers an invaluable contribution to the public good —which expresses a public interest.

To go on to additional aspects of administrative concern, emphasis should next be placed upon study of the relation of organizations to the local community in which they operate. If the association of individuals within the four walls of a plant comprises a social system, it is equally true that the social system of the locality is important to reckon with. This extends, of course, to the functioning of transportation, housing, recreation, education, public health, taxation, worship and other factors, including the social class stratification[6] which permeates each local area. The total community content of life should ideally contribute to the over-all well-being of those who labor in it. And of equal importance is the fact of the growing self-consciousness and solicitude of local communities themselves for the quality of life they are providing. Companies which have newly come to such communities cannot with impunity ride roughshod over local pride, local standards and forward-looking plans of sound community growth.

One does not have to be an all-out "decentralist" to agree with Whitehead that the time has now come when "almost every reason for the growth of cities, concurrently with the growth of civilization, has been profoundly modified." And the threat of atomic warfare has only added to the already urgent challenge as to the difficulty of achieving a humane existence in the overlarge cities which exemplify America's growth. Corporate decisions about plant location no less than about all the other aspects of local community relations in the next generation will be profoundly influenced by an administrative desire to assure that the life lived away from work shall add its substantial human attractiveness and appeal to morale-building efforts within the corporate walls. Life is all of a piece, and the sociology of administration requires attention to this truth in a land where community expansion has thus far been accidental and not sufficiently mindful that the purpose in building cities is to help build personalities. The orientation of managerial thinking, especially among the younger generation, to a community-relations consciousness and positive program clearly requires educational attention. For the administrative mind tomorrow will have to be community-minded.

In summary, then, some indispensable attributes of administrative capacity are: to be good at fruitful generalization; to be constructive and not exploitative, about capital, things and people; to be concerned to achieve friendly personal relations; and to be sensitive to evolving public interests and actual community relations. The able administrative mind is imaginative, foresighted, open-minded to necessary novelties of planning and experiment. And it has the courage of its convictions.

THE ADMINISTRATOR AS EDUCATOR

In referring to the responsibility of the administrator to be himself an educator, I have in mind one dominant thought. The conduct of his work requires constant dealings with his immediate colleagues individually and in groups and occasional group dealings with other members of the working force. The sound maxim here is *to make every administrative contact one which helps to advance the learning, the understanding and the concurrence of those being dealt with.*

Let the administrator count that day lost, the paraphrase might run, when top executives have had no fruitful association with others which has advanced their understanding and their eager response to the problems in hand. Particularly is this injunction pertinent to the time-consuming but essential work of committee meetings and group conferences of all kinds in which executive heads play a determining part. Such meetings are *educational occasions*, and they should be recognized as such and conducted consciously as such, if the best results are to obtain. The weakness of much committee work in which executives engage is that it is poorly planned, its purposes are not clearly conceived, its direction is casual and lacking in firmness and focus. The educational opportunity is not realized.

One specific device is worth a second mention here because of its tested values. Excellent self-educational results have been attained where the task of formulating and promulgating executive job analysis and job description statements is worked out by executives themselves individually and in groups. The self-study and organization study which inevitably flow from this effort can have unique educational values.[7]

A worthy dictum here is that "good training takes the place of much order-giving." This is unassailable. But it suggests a too limited objective. For the administrator has the further educational task of evoking of the self-responsive interests of men and groups throughout the organization. Those interests of personal and group initiative are learned and fostered by experiences which are satisfying. The whole development of some plan of participation in

productivity, for example, succeeds or fails as it is approached as an educational project. As *educator*, the administrative head is thus striving to supply the guidance toward new action in new settings in such skillful ways as to reinforce the building of improved new attitudes and skills up and down the operative hierarchy. His is the opportunity to apply the basic principle of learning that people learn what they live; they learn only what they live; and they learn it only in so far as they live it.[8]

A final word is in order about the self-education of top administrative persons, since testimony is general that there is a strong temptation for those who have reached the top to become complacent about their own attainments and capacities, and to slacken on self-educative efforts. If he is to play an educational role, the administrator will himself have to be learning. There are always important new things to be learned about one's own evolving organization; and, under present conditions, there are even more important facts about impinging outside influences requiring to be coped with. To keep alive a habit of curious and critical inquiry and of inventive proposal is often not easy for the executive who has "arrived." But it is the only safeguard against a disposition on the one hand "to let well enough alone," and on the other hand to worry and build up an anxiety neurosis because adverse factors seemingly beyond the executive's control either are harming or threatening to harm the organization. Too many administrative stomach ulcers are due to disinclination to undertake a study of urgent problems sufficiently searching to supply correctives which could resolve the problem. It is often easier to worry than to learn how to master puzzling situations. It is also easier for the arrived executive to place blame elsewhere than to educate himself as to how to meet new and untoward conditions.

THE ADMINISTRATIVE SUCCESSION

Yet even if executive leaders are in danger of losing their own drives to self-improvement, they are obliged to be mindful of this need on behalf of those below them in the administrative pyramid. Conscious concern for the executive succession is a necessary counsel of administrative prudence. Death and resignations are realities not to be ignored.

This means that some training policy has to be pressed at the top to cope with this inevitable contingency. Programs of overseeing executive understudies, of instituting upgrading conferences, of publicizing the existence of promotional ladders—these and other measures should all help to assure that individuals who are prospective top executives are given plenty of experience in trying out their powers with larger responsibilities. There is no substitute for trial at the job under conditions where educational correction and appraisal are definitely provided by those now in power.

Also, there is a real danger in keeping an executive so long in a subordinate post that he loses the proper fighting edge for effectively being advanced to a position of top responsibility. This can be due to loss of energy through age or to attitudes of discouragement and frustration which the waiting period has induced. Many a potential top administrator is lost to his best effectiveness by delays (for whatever reasons) in giving him the chance to measure his talents against greater responsibilities.

Some adaptation of the idea of "sabbatical leaves" from business to a university can be another valuable educational device. A number of universities are offering opportunities for mature corporate executives to return to the campus to take intensive "refresher" courses for various lengths of time and under diverse plans. Massachusetts Institute of Technology and the Harvard Graduate School of Business Administration exemplify different ways of achieving this desirable purpose. That there can be great stimulation and refreshment from a complete break with business preoccupations into a temporary academic background in associated study with other mature executives is unquestionable. And the benefits are the greater as the subject matter being studied is calculated to develop powers of generalization, imagination and what Whitehead calls a "philosophic habit" in the sense that, as he says, "in philosophy, the fact, the theory, the alternatives, and the ideal, are weighed together. Its gifts are insight and foresight and a sense of the worth of life. In short, that sense of importance which serves all civilized effort."[9]

THE ROLE OF THE UNIVERSITY

Mention of refresher courses and businessmen's "institutes" in universities leads appropriately to a final reference to the role of the university in training for administration. There is, of course, a sense in which administration cannot be taught but must be learned in first-hand experience with the policies and practices of specific organizations. And beyond a certain few "tool" subjects like accounting and statistics, what it is possible to learn through courses for undergraduates at the university level is chiefly the acquiring of vocabulary, the analysis of descriptions of individual company or industry practices, the accumulation of factual data on governmental relations and labor union activities. The study of cases of actual business problems can further be used to develop analytic powers and problem-solving capacity.

Administration and organization can be theorized about, but skill in the administrative handling of organization problems requires at its best a combination of actual experience and reflection upon it in a systematic, objective and concrete way.

The kinds of attitude, point of view and general humane approach, which constitute so crucial a part of adequate equipment for executive competence—these are the product of emulation of good examples, of suggestion, of moral conviction, of natural kindliness. Students can be told about these things; they can read about them (or such books as this would not be written!). But in the last analysis they will learn how to behave with conviction and operating competence only as they live their convictions and prove their worth in satisfying outcomes. Good teachers and wisely guided apprentice experience in executive posts can both have value, however, in forwarding these necessary ends of sound attitudes and wholesome conduct.

The problem of college or university instruction in administration today tends to be one of too early and too intensive specialization, of rote learning of "successful" practices and accepted techniques, of accepting and passing on uncritically the prevailing philosophy of business and "free enterprise."[10]

Yet at the graduate level, and occasionally in evening (extension) courses for people already at work and desirous of broadening their outlook and improving their competence, the opportunity is great both to kindle a willingness for further independent study and to come

in contact with attitudes, approaches and recorded experiences, all of which can have creative value. Organizations which will encourage their younger executives to undertake study of this kind are likely to receive a bountiful return on a modest investment in scholarship aid.

The practice of recruiting new executive candidates from the graduating centers of universities and engineering schools is now widespread.[11] And the methods of selecting and inducting these recruits are well established. One shortcoming of this practice, however, has not been as yet sufficiently confronted. The young man who goes from college to one company and stays with it for years is deprived of the valuable comparative experience of other companies; and he is never able to bring to his own organization any outside ideas unless he has studiously gone in search of them. This tends to inflexibility of outlook which is a handicap to the man and to the organization.

In short, if society is looking to the higher educational institutions for administrative leaders, there is still much work to be done by them to discover how best to fulfill this expectation. Recognition of this as an educational problem is hardly a generation old, and educational efforts are still more experimental in objective and method than many universities seem willing to admit. Nor has there been in any objective way, and animated by a social point of view, any comprehensive evaluation of the work of collegiate schools of business.[12] That such an appraisal would yield flattering or impressive results is by no means certain. The most superficial comparison of the careers of those who have entered business straight out of a liberal arts college with those who have graduated from schools of business suggests that there is much work to do in education for administration if we are to multiply the supply of administrators of the right caliber to meet the virtually inexhaustible demand.

TOWARD THE PERSONAL AND PUBLIC INTEREST

This chapter has focused attention on the educational role of those who administer and on the need for fuller planfulness and clearer purpose about the education of prospective administrators. All that has been said applies with *equal force to the education of leaders in the labor union movement.* Failure to enlarge upon this point implies no lack of appreciation of its integral importance. As labor union officials have inevitably to assume more and more interest in administrative processes and consequences, the fact is, of course, that *they are themselves essentially joining the ranks of administrators both in actuality and by indirection.* Hence, their education stands in exactly as important need of appraisal and of advancement as does that of managerial leaders. Nor are we without heartening evidences of worthwhile new experiments here.[13]

But I hazard the conjecture that this entire adult educational effort will wait for its best fruition upon the multiplying of projects in which the education of administrators and of labor leaders is to some extent occurring simultaneously in the same classrooms and seminars. The difficulties to be encountered in achieving this are real, but they appear to be transitional in character owing largely to the newness of the problem and the absence of definition and formulation of a body of administrative principles and practices. There is, as this book endeavors to suggest, far more of philosophy and of subject matter that can be identical in the instruction of both groups than is today widely realized. And it would be a great step ahead if, for example, in the "sabbatical" institutes above referred to there should be a liberal admixture of members from high labor union positions.

There has been progress in education as applied to corporate leadership. But it has thus far even at its best been lacking in clear and sufficiently broad objectives, been fragmentary in content and tentative in method. And it needs above all a wider grasp by teachers and students of the social and moral significance of administration and of the functional role of business in society.

The reason why this more dynamic and social educational emphasis is needed should now be clear. For the challenge of creating and facilitating organized administrative relations, democratically purposed, mindful of the whole man and ethically sensitive, will not down. Any wide grasp of the more profound meaning of administration and any widespread self-consistent program to give it effect still wait upon the acceptance of some philosophic underpinnings from which "practical" people tend to shy away.

The dictum of William E. Hocking has still to be interpreted into operational significance in administering the organizations of our land. For, he has said, "the principle of the future state must be that every man shall be a whole man."

Administration as a fine art has to undertake the translation of this truth into a growing reality within the conduct of the "substates" or corporate entities which together comprise the whole state. This has to be done in the public interest and no less in the interest of corporate bodies and of the personalities which compose them. All this will need the support of better education all along the line to accomplish the desired aim, integral as it is to the life and future of a democracy. It will also no doubt invoke in the lives of many the claims and commitments of an essentially religious outlook. For nothing less than the cultivation of whole men is what our kind of society is dedicated to. Nothing less than this, therefore, has to be shared as a responsibility by administrators who have themselves become wholesome enough to know how their labors combine the creative demands both of self and of society.

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Arthur Hoffman, Vice-President, Hosiery Workers of America, Philadelphia, Pa. "Union Acceptance of Technological Changes."

Paul B. Mulligan, Paul B. Mulligan Co., New York City. "Predetermined Time Values in the Office."

David Ginsburg, Manager, Philadelphia Division, The Wheeldex Co. "The 'How To Do It' of Office and Shop Systems Work."

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SOCIETY NEWS

THE CONNECTICUT CHAPTERS of SAM and the University of Connecticut are jointly sponsoring a one-week Management Conference which will be held August 26-September 1, 1951. This conference will be devoted to time study and methods and will feature lectures by recognized authorities in the field, work sessions and laboratory practice using the most modern types of equipment. For further information and details write to Professor Harold E. Smalley, University of Connecticut, Storrs, Conn.

THE DEPARTMENT OF INDUSTRIAL ENGINEERING of Washington University, St. Louis, is presenting an intensive course in Motion and Time Study in its summer school. The course will be given from June 7 through June 15 and is intended for personnel desiring a basic introductory course in Motion and Time Study. All the equipment of the laboratory will be available to increase the scope and understanding of students.

THE WASHINGTON CHAPTER held the last in a series of six monthly Panel Conferences on April 5th at the Federal Personnel Council. The general subject of this series was: "*Management Problems of Other Governments and International Agencies.*" The sixth meeting had as its topic: "*Problems of Developing an International Staff for the North Atlantic Treaty Organization*" which was presented by Mr. Alvin C. Roseman, the U. S. Representative for Specialized Agency Affairs at Geneva, and is presently assisting the Bureau of the Budget in planning organization to administer International Aid Programs.

THE KANSAS CITY CHAPTER'S March meeting featured Professor Leland S. Hobson, Assistant Director of Industrial Engineering at Kansas State College, who spoke on "*A Year's Progress in Industrial Management Methods*".

Emerson Trophy Standings
Summary of Accumulated Point Awards — Chapter Performance Award Plan — March, 1951

CHAPTER	TOTAL
Washington	2176
Milwaukee	1902
Greensboro	1630
Detroit	1525
Pittsburgh	1448
New York	1424
Philadelphia	1382

THE NORTHERN NEW JERSEY CHAPTER announces the election of the following officers for the 1951-52 year:

President: Frederick J. Bishop (Celanese Corp. of America)
Executive Vice President: Gerald Z. Wollam (Westinghouse Electric Corp.)
Secretary: William J. Jaffe (Newark College of Engineering)
Treasurer H. Richard Carlson (A. & M. Karagheusian, Inc.)
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Vice President in Charge of Membership: Philip A. McWilliams (A. B. Dumont Laboratories, Inc.)
National Director of Northern New Jersey Chapter (3 years):
Oliver J. Sizelove (Newark College of Engineering)
Trustee of Northern New Jersey Chapter (5 years):
Clifton H. Cox (Clifton H. Cox, Inc.)

V. I. KORSGAARD, production manager, was elected to the board of directors of Personal Products Corporation of Milltown, N. J.

THE NORTHERN NEW JERSEY CHAPTER held a Joint Industrial Engineering-Industrial Relations Conference on March 9th. The theme of the conference was "*Creating Manpower*". The speakers included Eldridge Haynes, President and Publisher of "*Modern Industry*" and President of National Management Council, and Dr. Luther Gulick, Mayor's Committee on Management Survey, City of New York.

NORTH CAROLINA STATE College Student Chapter of SAM and the Student Chapter of the American Institute of Industrial Engineers were co-sponsors of a one-day Conference on "*The Industrial Southeast—A Management Challenge*". Among the speakers were General Lewis B. Hershey, Director of Selective Service, and Dr. Seymour L. Wolfbein, Chief of Manpower and Labor Division, Bureau of Labor Statistics.

Bibliography Of Taylor Collection

THE PAPERS gathered by the Stevens Institute of Technology for the special Taylor Collection have been completely listed and indexed. An abridged list is available to those in the management field who are interested in the subject. Write to Miss Elizabeth G. Hayward, Librarian, The Taylor Collection, Stevens Institute of Technology, Castle Point, Hoboken, New Jersey.

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